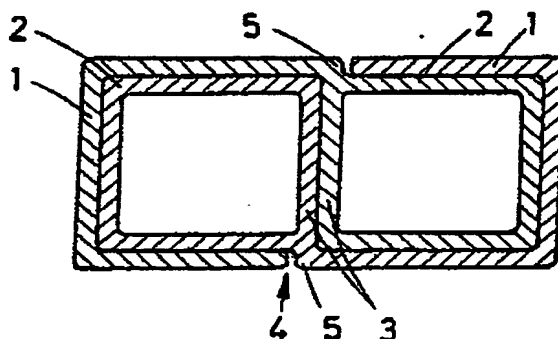




## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

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(54) Title: PROFILE



## (57) Abstract

A profile consisting of two sections (1, 2) joined together. One section (1) is an open hollow section with an inner contour which is uniform with and somewhat bigger than the outer contour of the other section (2) and where the opening (4) is arranged so that two identical profiles can be telescoped into each other. According to the invention the other section (2) is solid or a closed hollow section. The opening (4) of the open hollow section (1), has a width which is somewhat bigger than the wall thickness of the hollow section (1) in an area (5), which is situated on the opposite side relative to the opening (4) of the connection (3) between the sections (1, 2). Thus, it is achieved that the open hollow sections (1) of the profiles substantially, completely surround the other sections (2) of the profiles, respectively, when two identical profiles are telescoped into each other.

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Profile

This invention relates to a profile consisting of two sections that are joined together out of which one is an open hollow section with an inner contour which is uniform with and somewhat bigger than the outer contour of the other section and where the opening is arranged so that two  
5 identical profiles can be telescoped into each other.

A similar profile has previously been known by GB-A-1,476,324, but there, both sections are open and furthermore the opening of each hollow section is so big that the respective sections are only partly surrounded. This  
10 naturally has an injurious effect on the torsional rigidity both concerning one profile and two profiles telescoped into each other.

The object of the present invention is to achieve a profile of the type explained by way of introduction which is not impaired with above said  
15 disadvantages and this is made possible in that the other section, is solid or a closed hollow one, and that the opening of the open hollow section, has a width which is somewhat bigger than the wall thickness of the hollow section in an area, which is situated on the opposite side relative to the opening of the connection between the sections, so that  
20 the hollow sections of the profiled substantially completely surround the hollow sections of the profiles, respectively, when two identical profiles are telescoped into each other.

According to a special characteristic of the invention the hollow section  
25 of two profiles can be united in a way that gives them a common wall and a profile which can be used in many ways. Thus, if the sections are orientated so that an imaginary line which divides the sections of one profile in half co-incides with an equally imaginary line of the other section, the result is a straight profile which can be combined with  
30 identical profiles to build up the partition of a house or to cover the facade which will be explained further as follows. If the sections are orientated so that an imaginary line which divides the sections of one profile forms an angle with an equally imaginary line of the other profile, an angle-shaped profile is achieved, which can be used together  
35 with the straight profile to get a corner etc.



The said other section may either be solid or a hollow section, depending on the application for which the profile is intended.

5 For applications where the profile according to the invention is supposed to rotate, it is preferable for the sections to be semi-circular and joined so that the profile gets a circular cross-section. Two profiles telescoped into each other results in a perfectly round axle and in case the said other section is a hollow section it is an advantage according to a specific characteristic to arrange at least one radial wall in the  
10 hollow section.

The invention will, in the following, be explained further with reference to the enclosed drawing which in Figure 1 shows a cross-section of an arrangement according to the invention with two profiles telescoped into  
15 each other. Each of the profiles consists of two rectangular hollow sections joined together. Figure 2a shows a cross-section of profiles of another design telescoped into each other. This profile has a cross-section which from a general view, is circular. Figure 2b shows a profile according to Figure 2a where one hollow section is fitted with a radial  
20 wall. Figures 3a and 3b show a straight and an angle profile, respectively, which has been achieved by combining two profiles according to Figure 1. Figure 4 shows a concluding profile which is intended to be combined with the profiles according to Figures 3a or 3b.

25 A profile according to the invention consists of two sections 1, 2 joined together by means of a common wall 3.

Of the sections, section 1 is a hollow section with an inner contour which is uniform with and somewhat bigger than the outer contour of  
30 section 2. Depending on the field of application this can also be a hollow section filled with an insulation material or be solid and of the same material as the rest of the profile. Section 1 has an opening 4 which runs along the full length of the profile like a slot. The opening 4 is situated on one side of section 1 close to where it is connected to  
35 section 2 and has a width which is at least as big as the wall thickness of section 1 in an area 5 which is situated on the opposite side relative to the opening of the connection between the sections 1, 2 i.e. the wall 3.



An advantage with such a profile is that it can be telescoped into an identical profile and that section 1 of the profiles will respectively be surrounding section 2 of the other profile.

5 It can be noted that two profiles telescoped into each other in such a fashion together form a proportionately rigid hollow profile with an approximately smooth outer contour. Such a profile can easily be lengthened to an arbitrary length, without loss of rigidity, as the joins of the profiles respectively will be off set, and thus the profiles can be  
10 suitably used instead of boarding when building scaffolding. Another field of usage is swimming and boat bridges, when the cavities of the profile should be sealed or filled with a floating material, which will make the profiles unsinkable and due to that most suitable for this field of usage.

15 What has been described above relating to the profile according to Figure 1, is mainly applicable on the profiles according to figures 2a and 2b, apart from the fact that these profiles from a general point of view have circular cross-sections i.e. section 1, 2 are semicircular. Two profiles  
20 telescoped into each other can be used as an axle for transmitting a torsional movement. To increase the torsional rigidity and decrease the risk of natural oscillation of such an axle, one or more radial walls 6 can be arranged as shown in Figure 2b.

25 The profile according to Figures 3a and 3b has been achieved by joining two profiles according to Figure 1 by means of a common wall 7 and 8 respectively. The profile according to Figure 3a is a straight, and from a general point of view, rectangular profile which can be put together in the same way as the profile according to Figure 1, but the difference is  
30 that an arbitrary number of profiles can be put together. In this way whole walls, floor or front faces can be achieved. When suitable at such applications, the cavities of the profiles can be filled with a heat insulating material. Corners are achieved with the profile according to Figure 3b and a wall or something similar is preferably concluded by a  
35 profile according to Figure 4. The walls of the hollow section 1 of this profile have a semi-circular part 9. This part can also be V-shaped or have any other suitable or attractive shape.



It is obvious that this invention cannot be considered to be restricted to the above described and on the drawing showed design but can be designed in many ways within the scope of the invention. The cross-section of the sections of a profile according to the invention, can from a  
5 general point of view be oval-shaped or elliptically egg-shaped.



Claims

1. Profile consisting of two sections (1, 2) joined together out of which one section (1) is an open hollow section with an inner contour which is uniform with and somewhat bigger than the outer contour of the other section (2) and where the opening (4) is arranged so that two identical profiles can be telescoped into each other, characterized in that, the other section (2), is solid or a closed hollow section, and in that the opening (4) of the open hollow section (1), that has a width which is somewhat bigger than the wall thickness of the hollow section (1) in an area (5), which is situated in the opposite side relative to the opening (4) of the connection (3) between the sections (1, 2) so that the open hollow sections of the profiles substantially, completely surround the other sections (2) of the profiles, respectively, when two identical profiles are telescoped into each other.
2. Profile according to claim 1, characterized in that, the hollow section (1) of two separate profiles are joined together by means of a common wall (7, 8).
3. Profile according to claim 1, characterized in that, said other section (2) is a hollow section.



FIG 2a

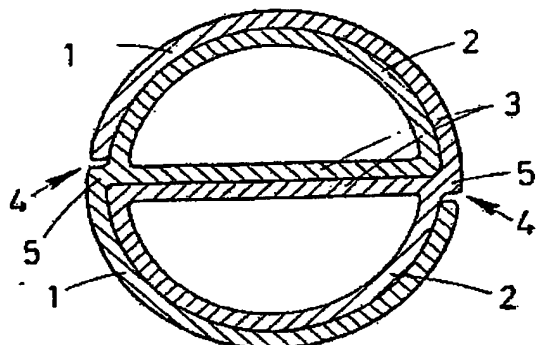


FIG 2b

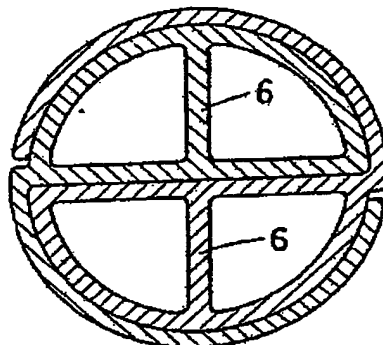


FIG 3a

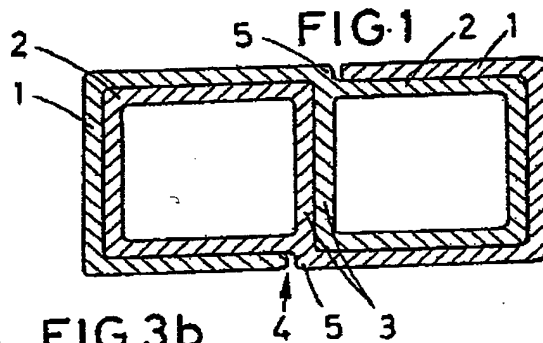
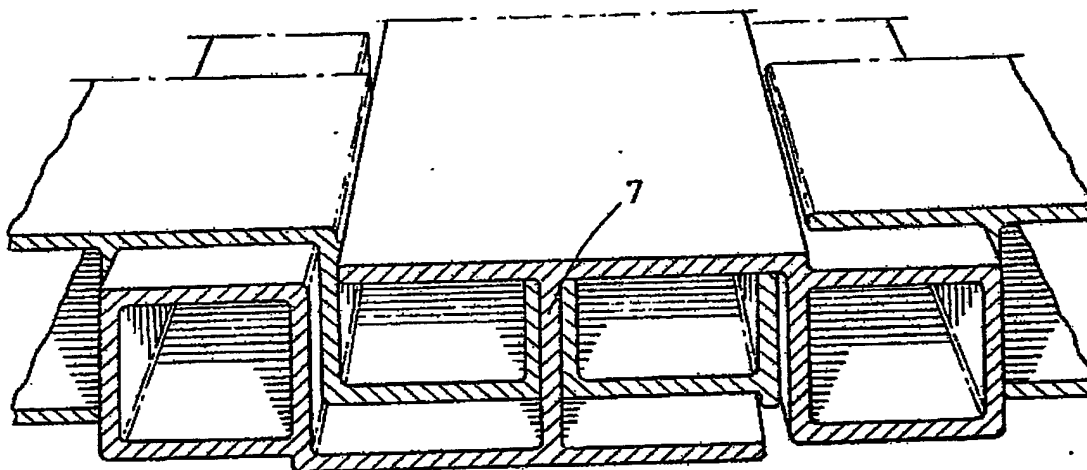


FIG 3b

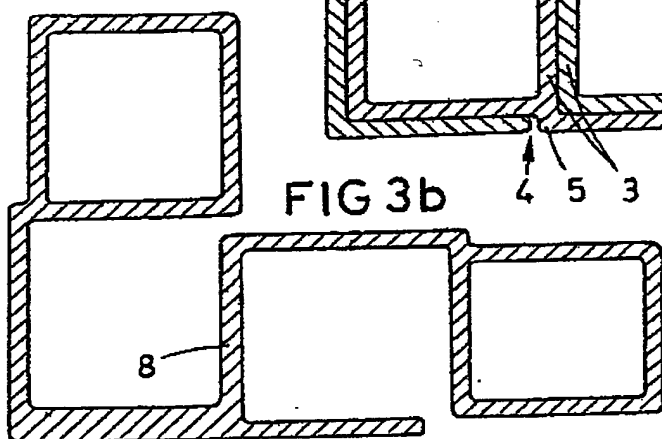
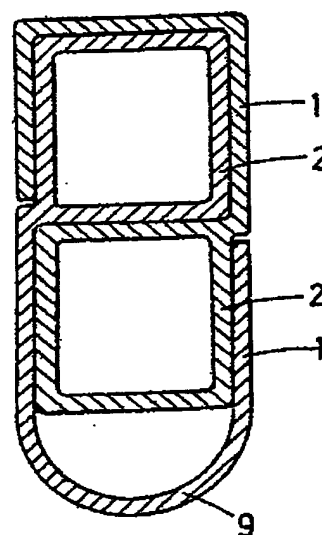


FIG 4





# INTERNATIONAL SEARCH REPORT

International Application No PCT/SE83/00217

## I. CLASSIFICATION OF SUBJECT MATTER (if several classification symbols apply, indicate all) \*

According to International Patent Classification (IPC) or to both National Classification and IPC 3

F 16 S 3/04 // E 01 D 15/14, E 04 C 3/04, E 04 G 5/08

## II. FIELDS SEARCHED

Minimum Documentation Searched \*

Classification System

Classification Symbols

IPC : E 01 D 15/14, E 04 C 3/04-07, E 04 G 1/15, 5/06, 08  
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Documentation Searched other than Minimum Documentation  
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## III. DOCUMENTS CONSIDERED TO BE RELEVANT <sup>14</sup>

Category *	Citation of Document, <sup>15</sup> with indication, where appropriate, of the relevant passages <sup>17</sup>	Relevant to Claim No. <sup>16</sup>
A	DE, A, 1 913 623 (THEODOR WUPPERMANN GMBH) 24 September 1970	
A	GB, A, 1 476 324 (WARD BROTHERS LIMITED) 10 June 1977	
A	US, A, 745 570 (W H CLARKE) 1 December 1903	
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## IV. CERTIFICATION

Date of the Actual Completion of the International Search \*

1983-08-29

Date of Mailing of this International Search Report \*

1983-09-01

International Searching Authority <sup>1</sup>

Swedish Patent Office

Signature of Authorized Officer <sup>20</sup>

Ingemar Hedlund

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